areas of adjacent oriented fibers fused together to form a network or continuous matrix while retaining fibrous structure in the composite.

63. A prosthesis as claimed in Claim 62, wherein the fused fibers are in chopped form.

64. A prosthesis as claimed in Claim 62 being of a substantially void free form.

65. A prosthesis as claimed in Claim 62, wherein the inorganic filler is a particulate filler.

66. A prosthesis as claimed in Claim 62, wherein the filler is selected the group consisting of talc, mica, graphite, metal oxides, metal hydroxides, carbonates and phosphates.

67. A prosthesis as claimed in Claim 62, wherein the inorganic filler is a biocompatible material.

68. A prosthesis as claimed in Claim 67, wherein the biocompatible material is an apatite.

69. A prosthesis as claimed in Claim 68, wherein the apatite is hydroxyapatite.

70. A prosthesis as claimed in Claim 62, wherein the material is of extruded form.

71. A prosthesis as claimed in Claim 70, wherein the material is in hydrostatically extruded form.

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72. A prosthesis as claimed in Claim 62, having flexural modulus between 7 and 30 GPa.

73. A prosthesis as claimed in Claim 72 having flexural modulus greater than 10 GPa.

74. A prosthesis as claimed in Claim 72 having a flexural modulus greater than 12 GPa.

75. A prosthesis as claimed in Claim 72 having a flexural modulus greater than 15 GPa.

76. A prosthesis as claimed in Claim 62 having a flexural strength

between 50 and 150 MPa.

77. A prosthesis as claimed in Claim 76 having a flexural strength greater than 60 MPa.

78. A prosthesis as claimed in Claim 76 having a flexural strength greater than 80 MPa.

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79. A prosthesis as claimed in Claim 76 having a flexural strength greater than 100 MPa.

80. A prosthesis as claimed in Claim 62 having a flexural ductility between 0.5 and 10 %.

81. A prosthesis as claimed in Claim 80 having a flexural ductility between 0.5 and 7%.

82. A prosthesis as claimed in Claim 81 having a flexural ductility between 0.5 and 4%.

83. A prosthesis as claimed in Claim 62, wherein the fibrous polymeric material is a polyolefin.

84. A prosthesis as claimed in Claim 83, wherein the polyolefin is polyethylene.

85. A prosthesis as claimed in Claim 83, wherein the polyethylene is of high modulus.

86. A prosthesis as claimed in Claim 62, wherein it includes a recrystallized melt phase of the polymeric material which has a melting point less than that of the oriented fiber and which binds the fiber material together.

87. A prosthesis comprising a composite material, said composite material comprising a particulate inorganic filler material and a fibrous polymeric material wherein the fibrous polymeric material comprises molecularly oriented polymeric fibers and a recrystallized melt phase of the same polymer as the fibers, the recrystallized melt phase consisting of from 5% to 50% by weight of the polymeric material and having a melting point less than that of the molecular oriented fiber, the recrystallized melt phase joining areas of adjacent fibers to form a network or continuous three-dimensional matrix which binds the fibers and filler together.

88. A prosthesis according to Claim 62, wherein the polymeric material is a homo- or co-polymer of a polyolefin.

89. A prosthesis as claimed in Claim 88, wherein the polymer has a weight average molecular weight of 50,000 to 3,000,000.

90. A composite as claimed in Claim 89, wherein the polymer has a B1 weight average molecular weight of 100,000 to 3,000,000.

91. A prosthesis as claimed in Claim 90, wherein the polymer has a weight average molecular weight of 500,000 to 3,000,000.

92. A prosthesis as claimed in Claim 62, wherein the fiber is gel or melt spun fiber. --